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50X1-HUM

The Baltika operates on four wave bands as follows: long-wave 2,000 - 732 m (150-410 kc); medium-wave, 577-187.3 m (520-1,600 kc); first short-wave band, 24.8-33.3, (12,100-9,000 kc); second short-wave band, 32.7-76.0 m (9,200-3,950 kc). The intermediate frequency is 465 kc.

The first tube of the receiver (6SA7) is a frequency converter; the second (6SK7) is an if amplifier; the third (6SQ7) is the AVC detector, and first audio amplifier; the fourth (6V6) is a power amplifier; the fifth (5Ts4S), a rectifier, and the sixth (6E5), a visual tuning indicator.

Electric and Acoustic Characteristics

The electrical specifications are alike for both receivers, except for oscillator frequency stability, which is somewhat higher in the Baltika than in the M-697. The rated output power, when the harmonic factor equals 7%, is not less than 2. Sensitivity for long and medium waves is not less than 200 mv; for short waves, 300 mv. Signal attenuation for 10 kc detuning on medium and long waves is not less than 26 db. Attenuation of image channel at higher frequencies of the medium- and long-wave bands is not less than 30 db; in the short-wave band, not less than 12 db.

The frequency characteristic, taken according to sound pressure, is within 20 db in the 100-4,000 kc frequency band, with the harmonic factor, also measured by sound pressure, not exceeding 10 percent. The AVC provides for a variation of output power not greater than 8 db when the signal voltage at the input changes 20 times.

Drift of the oscillator frequency in 10 minutes after 5 minutes warm-up is as follows: in the Baltika receiver for long and medium waves, not over one kc, for the second short-wave band, not over 4 kc, and for the first band, not over 6 kc; in the M-697 receiver for long and medium waves, not over 1.5 kc, and for short waves, not more than 6 kc. Sensitivity at the sound pickup input corresponding to rated power, at a frequency of 400 cps, amounts to 0.25 volt. The level of background and inherent noise at the output as compared with rated power is minus 30 db. Power required from the line, 68 watts.

The basic structural details differentiating the Baltika from the M-557 include the following:

A new, simplified design of the two-gang variable condenser ensuring the necessary overlapping of the bands, highly stable capacitance, small losses, and a more desirable variation in capacitance. Moreover, the better arrangement and mounting of the unit on the chassis eliminates the possibility of microphonic effects in the receiver -- which caused so many complaints from owners of the M-557.

Reducing the dimensions of the hf and if coils made it possible to use one-third the amount of carbonyl iron, wire, and pressed power material in the cores.

Temperature compensation by means of a ceramic condenser considerably increases the frequency stability of the oscillator in the Baltika.

However, despite these special features which make the Baltika more desirable than the previous models, some structural defects should be noted. First of all, the dial indicator is not illuminated, which makes tuning difficult. The absence of a jack for an additional loud-speaker is also a drawback, since such jacks make a wider use of the receiver possible.

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